

What is claimed is:

CLAIMS

1. An apparatus for providing I/O access to at least one data storage device across a network, and the apparatus comprising:

a network module configured to couple to the network for sending and receiving data packets;

5 at least a first stage and a second stage serially coupling the network module to the at least one storage device; and

logic responsive to a received data packet from the network to serially move data from the received data packet from said network module through each of said first and said second stages to the at least one storage device, and the logic further

10 responsive to a read request from the network to send a data packet to the network via said network module from whichever of said at least first and second stages and the at least one storage device includes the data.

2. The apparatus of Claim 1, with said logic further operative to coalesce received
15 data packets corresponding with a single file or data stream in said first stage.

3. The apparatus of Claim 1, with said logic further operative to aggregate
received data packets corresponding with a plurality of files or files in said second
stage.

20 4. A method for providing I/O access to at least one data storage device across a network, and the method comprising the acts of:

coupling to the network for input and output of data;

25 coalescing data received from the network which corresponds with a selected file or data stream;

aggregating data from a plurality of selected files or files coalesced in said act of coalescing; and

storing said data aggregated in said act of aggregating.

5. An apparatus for providing I/O access to at least one data storage medium across a network, and the apparatus comprising:

- 5 a network module configured to couple to the network for sending and receiving data packets;
- at least one data storage device coupled to said network module and the at least one data storage device for providing an input and an output of datum stored on the at least one data storage medium;
- 10 a hard drive coupled to said network module for the caching of at least one of file structures for the stored datum and file structures together with the corresponding datum stored on the at least one data storage medium; and
- logic for determining a selected cache policy for said at least one data storage device based on a user selection and for caching on said hard drive a corresponding
- 15 selected one of the file structures and file structures together with the corresponding datum responsive to the user input.

6. A method for providing I/O access to at least one data storage medium across a network, and the method comprising the acts of:

- 20 coupling to the network for sending and receiving data packets;
- providing an input and an output of datum stored on the at least one data storage medium; and
- caching at least one of file structures for the stored datum and file structures together with the corresponding datum stored on the at least one data storage medium
- 25 responsive to a user selection.